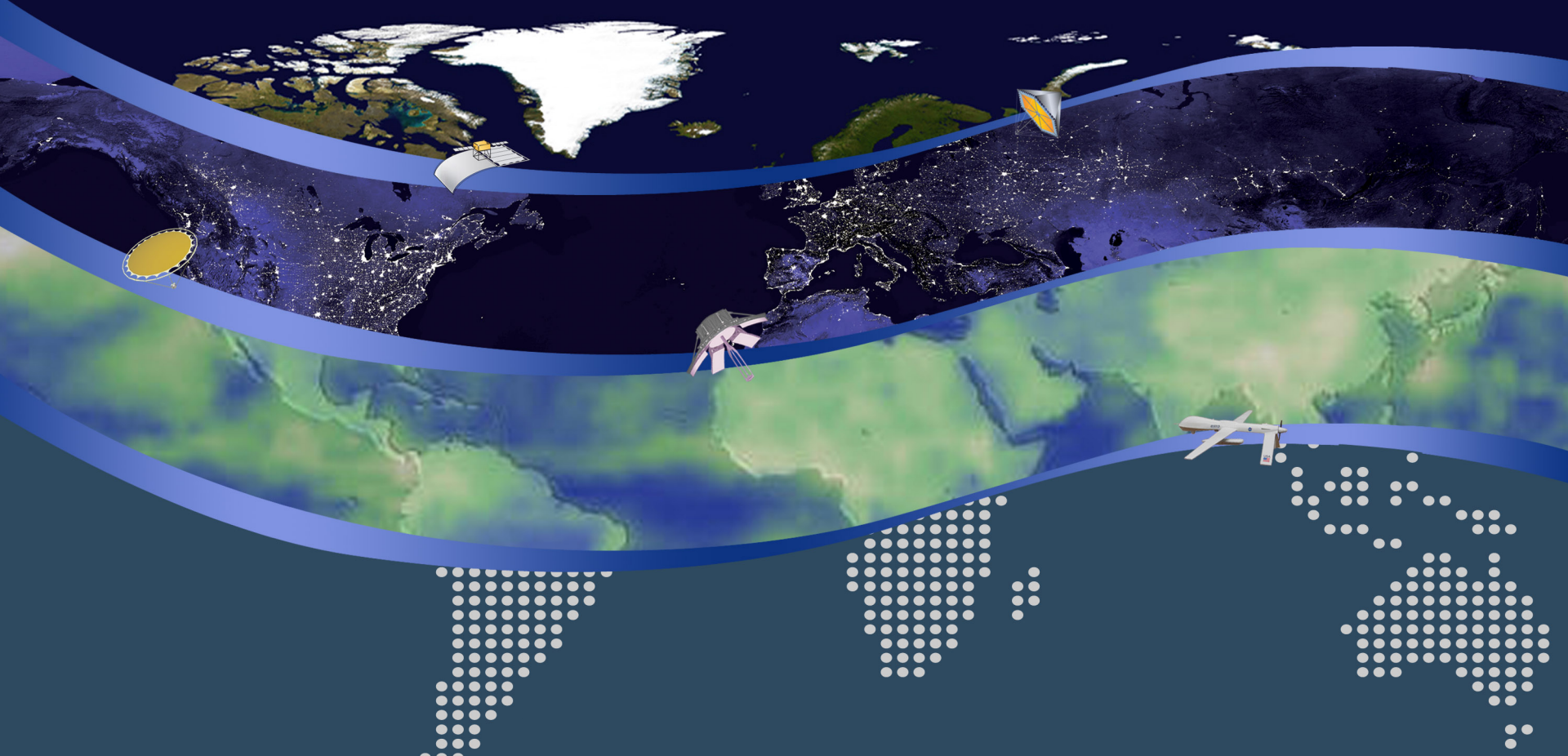

Instrument Incubator Program (IIP)

A.40 ROSES-13

Parminder Ghuman, IIP Manager
Earth Science Technology Office (ESTO)

Potential Bidders' Conference –May 15, 2013

IIP Bidders' Conference

Welcome!

This conference is being recorded and all material will be posted for public use.

To access the audio portion of this conference please contact:

1-888-469-3064

Passcode: **47449** followed by a **"#"**

This presentation is available at
http://esto.nasa.gov/about_esto_solicitations.html

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Instrument Incubator Program

NASA

Science Mission Directorate

Earth Science Division

Research

- Carbon Cycle and Ecosystems
- Climate Variability and Change
- Atmospheric Composition
- Water and Energy Cycle
- Weather
- Earth Surface and Interior
- Modeling, Analysis, Prediction
- High End Computing

Flight

- Missions in development
- Missions in operation
- Decadal Survey missions
- Earth Venture class missions

Applied Sciences

- Health & Air Quality
- Water Resources
- Disasters
- Ecosystems

Technology

- **Instrument Incubator Program**
- Advanced Component Technology Program
- In-Space Validation of Earth Science Technologies (InVEST)
- Advanced Information Systems Technology

Instrument Incubator Program

- **Observation Technology Program Objectives**
  - Enable new Earth observation measurement
  - Reduce the risk, cost, size, volume, mass, and development time of Earth observing instruments

IIP covers the entire instrument development process that includes instrument design, breadboard, prototype, and engineering model construction, laboratory, and/or airborne demonstrations for innovative measurement techniques that have the highest potential to meet the objectives of this program and the measurement capability requirements of the NASA Earth science community.

For more information on the current and past funded technologies visit *esto.nasa.gov*

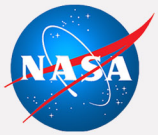
IIP Overview

- Traditionally new solicitations have occurred about every 3 years

- To date, six IIP solicitations have been released:
  - IIP-10: 16 awards; scheduled to be completed in 2014
  - IIP-07: 21 awards
  - IIP-04: 23 awards
  - IIP-02: 9 awards
  - IIP-01: 11 awards
  - IIP-98: 27 awards

IIP-13 Solicitation Background

- The first few rounds of the Instrument Incubator Program (IIP), beginning in 1998, laid much of the groundwork for the 2007 Earth Science Decadal Survey
- Following release of the 2007 Decadal Survey, ESTO explicitly tailored its observation program solicitations (ACT-08, ACT-10, IIP-07, and IIP-10) solicitations toward advancing Decadal Survey (DS) priorities and has funded around 70 new competitively selected projects that support the Decadal Survey missions to varying degrees.
- These projects in both mission-focused and crosscutting technologies are intended to reduce the technical risk associated with implementing the DS recommended missions/measurements.
- These investments address traditional approaches to the DS missions as outlined in the DS and Climate-Centric Architecture reports.
- Midterm assessment of NASA's implementation of DS missions recommends to:
  - Seek "alternative" remote sensing platforms and observing strategies that are emerging and being proven. These include flights on piloted and/or unpiloted aircraft, hosted payloads on commercial satellites, small satellites, the International Space Station, and the flight of multiple sensors in formation rather than on a single bus.
- Alternative mission concepts can offer considerable implementation flexibility.



IIP-13 Solicitation Focus

- This IIP solicits new technologies addressing any of the science focus areas in NASA's Earth Science program (see ROSES-13 Appendix A.1, "Earth Science Overview", for descriptions of the focus areas) to enable new types of observations that improve temporal and spatial resolution capabilities for Earth science measurements. Technologies may target any Earth science question or issue in order to advance the strategic goals, questions, and research objectives outlined in Appendix 1 of the 2010 Science Plan for NASA's Science Mission Directorate available at http://science.nasa.gov/about-us/science-strategy/).

- Rapid advances in Earth science instrument technology are enabling significantly smaller instruments that may be able to meet many science needs in the future.

- Rapid evolution of spacecraft bus technology toward smaller satellites, when combined with increased launch opportunities on a more diverse set of platforms and launch vehicles, opens the possibility for many new approaches to Earth science mission implementation.

New Emphasis for this IIP solicitation

- Seeks cost-effective instruments that enable innovative measurement techniques that could
  - *Employ multiple sensors in formation or use alternative platforms such as small satellites and co-manifested opportunities, including hosted payloads and ride-share programs that will be launched to orbits appropriate for observations of the Earth system or*
  - *Provide improvements to traditional instrumentation and measurement techniques*

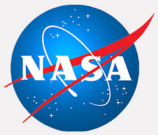
Earth Science Focus Areas

- **Carbon Cycle and Ecosystems**
  - *See Appendix A.1 Section 2.1*
- **Climate Variability and Change**
  - *See Appendix A.1 Section 2.2*
- **Atmospheric Composition**
  - *See Appendix A.1 Section 2.3*
- **Water and Energy Cycle**
  - *See Appendix A.1 Section 2.4*
- **Weather**
  - *See Appendix A.1 Section 2.5*
- **Earth Surface and Interior**
  - *See Appendix A.1 Section 2.6*

Appendix A.1, "Earth Science Overview" *and "**2010 SMD Science Plan**" are also available at* http://esto.nasa.gov/about_esto_solicitations.html.

IIP-13 Solicitation Summary

- **Budget**
  - Expected program budget for first year of new awards: ~ $23M
  - ~15-20 awards
  - Value of each award expected to be in range of ~$1.5M per year
- **Duration**
  - 1 year minimum to 3 years maximum
- **Schedule**
  - Solicitation release: April 16, 2013
  - Notice of Intent due: May 31, 2013
  - Proposal due: July 15, 2013
  - Selection: December 2013 (tentative)



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